

ABSTRACT OF THE DISCLOSURE

An electrosurgery medical device is enhanced with unique solution-assistance, and comprises, in combination, co-operating device jaws including jaw portions for manipulating tissue, and a plurality of solution infusion openings defined and spaced along each of the jaw portions, for receiving electrolytic solution and infusing the solution onto and into tissue to be manipulated, along said jaw portions. As preferred, the device further comprises at least one, and most preferably, many, longitudinal groove(s) along at least one and most preferably, both, of the jaw portions, with the solution infusion openings located in the groove or grooves. The solution is energized with RF energy and contributes to the functions and beneficial effects of the instrument. The solution exits the openings in the grooves at sufficient flow rates to separate substantially all the operative surfaces of the device from tissue, thereby substantially completely preventing adherence between the operative surfaces and tissue. The solution is further energized to a range of energy densities such that tissues to be affected are sealed against flow of blood, lymphatic fluids, air, and other bodily fluids and gases.